

EHWA Engineering History and Walking Tour Website

Engineering Heritage Australia (EHA) National Committee Meeting

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EHWA Engineering History Website

Introduction

EHWA has created a wiki website at <http://ehwa.wikidot.com/> to capture and share the engineering achievements of Western Australia, through its people, eras, regions and engineering themes. The idea of an Engineering History website was proposed in early 2018 by Peter Hopwood and Mike Taylor, members of EHWA.

Peter and Mike were aware of several previous attempts in Western Australia to publish a history of engineering in WA going back as far as an offer by Dennis Cumming in May 1993. Examples of existing books/publications with biographies include 'They built South Australia' by Cumming and Moxham, 'The Engineers' by Brian Carroll and 'Eminent Engineers Biographies' by EHQA at <https://www.engineersaustralia.org.au/resource-centre/resource/eminant-queensland-engineers-volume-2>. The problem with books is that they are expensive to publish and that they are out of date immediately the final editing is completed.

Rather than a book, or the option of a set of PDF documents, EHWA supported Peter and Mike's concept of a website with the functionality of Wikipedia, easy to expand and update; and providing targeted page sized information that Engineers Australia members in Western Australia would find interesting and useful.

Brief discussions were held with Engineers Australia Canberra where it was confirmed that the functionality that could be made available from EA's existing systems was limited to the style and processes associated with the existing engineersaustralia.org.au website as exemplified by the existing Engineering Heritage Australia webpages. EHWA considered that this type of website did not support the functionality that was considered necessary. Additional functionality supported by a Wikipedia type site includes site specific membership registration, permissions, task modules, customised top and side navigation bars, page categories, page creation, tags, links (both internal and URLs), text formatting, image box, image sizing, tables, charts, backup and statistics, all of which greatly assist the creation of an interesting and useful webpages.

EHWA Engineering History Website Team

Mike Taylor	Team project manager, website administrator, EHWA Secretary.
Peter Hopwood	Team member, website administrator, EHWA Chair 2019, EAWA President 2000.
Chris Fitzhardinge	Team member, historian, EAWA President 2009.
Peter Blockley	Team member, experienced in private industry, ACEA Chairman 1982-1984.
Phil Plaisted	Team member, experienced in mining industry.
Karen Riddette	Team member, website administrator, experienced in information technology, led development of the walking tour website, EHWA Chair 2017-18

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Developing the content

As mentioned earlier, the website was first proposed in early 2018. First activities were to get a suitable team together and ensure that the project had in-principal support from EHWA and the Engineers Australia Western Australian Division. Finding the right people, briefing them on the background and vision and arranging first meetings took to mid 2018. This period also included presentations to the EAWA Division Committee and the WA Committee of Consult Australia. Importantly, scope was confirmed as professional engineering in WA through to 1985. Monthly meetings were then held where the team researched available material (of which there was a lot) and developed a detailed vision for the content and structure of the website, as documented in a hierarchical table of contents. It took the team several iterations and advice from experienced historians through the remainder of 2018 to develop an agreed table of contents and webpage structure based on the concept of development eras. Alternatives were an expertise (civil, electrical etc) focus or an industry (railway, water, mining etc) focus and while some web pages have this focus, they are located within a broad era structure.

Biographies were always seen as a key component of EHWA's Engineering History website. With the decision by EHA to support the drafting of biographies for the Centenary Book 'Anything is possible', the first half of 2019 was spent drafting an initial set of 20 'must have' WA biographies. EHWA produced more biographies than what was requested by the Centenary Book Committee with the intention that all biography material would be incorporated in the EHWA website.

It was also during the first half of 2019 that Karen Riddette researched website options, identified wikidot.com and started becoming familiar with Wikidot's templates, functionality and coding help pages. By mid 2019 an initial set of biographies had been completed, the team had agreed the proposed structure and content; and the ehwa.wikidot.com site had been established with the site registered to an EHWA Google address (engineeringheritagewa@gmail.com). Commencing mid 2019, Peter Hopwood and Mike Taylor then started adding material to the EHWA Engineering History webpages. First focus was to draft an engineering history for each of the historical eras with this being prepared by members of the team. Second focus was to load available material into the People and Appendices pages. By 10th December 2019 sufficient material had been loaded to enable the site to be 'launched' at an Engineers Australia Western Australian Division event.

Choosing the Wikidot platform

To create a website with Wikipedia functionality, two main options were available:

- Use wiki software (like the free Mediawiki) installed on a personal web server; or
- Host the wiki site with an external provider, usually for an ongoing fee to remove ads.

Using a committee member's personal web server had a risk of it being accidentally lost. We decided to go with a hosted site from an external provider, and chose wikidot.com for the following reasons:

1. easy to use tools for non-technical people (including back end setup);
2. mature provider, using templates that work well across PC, tablets and mobiles;
3. plenty of file storage space (5GB) for documents, images, oral histories etc;
4. indexed by Google search;
5. customisable design, including own domain name if desired;
6. allows shared admin ownership and transfer of ownership;
7. inexpensive, only \$50 per year to remove ads and increase the storage; and
8. includes tools to restore previous versions and download a full site backup.

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Also, there aren't too many other options out there. The primary concern with wikidot.com is that the developers haven't shown it much love in recent years, increasing the risk the platform will become unavailable or get hacked if security lapses. However, all hosted options have this risk, even Google (the Google+ option Karen Riddette was looking into a couple of years ago has since been shut down), so we accept the risk and do regular backups to manage it.

Developing the website

The various roles, skill sets and estimated time invested in setting up the site so far is outlined in the table below.

Activity	Skill set	Number of people	Time estimates
Team coordination and meetings	Project management	Mike	Weeks
Set basic look and feel	Using wikidot admin tools to select a theme, set up menu and sidebars	Karen and Mike	Days
Setting up the page structure	Logical thinking to categorise pages and develop naming and tagging conventions	Mike and Karen, with input from project team	Days
User training, help pages, cheat sheets	Wiki familiarity	Karen, Mike	Hours
Writing content	Researching, writing in MS Word	Biography Project team (~5 people)	Months
Adding content to the wiki	Using the wikidot tools to enter and format text, upload files, add images and cross-link text to other pages.	Mike and Peter added 99% of the content	Months
Site maintenance	Using wikidot tools to fix unlinked or duplicate pages	Karen, Mike, Peter	Weeks
Adjusting wikidot themes for prettier images, lists, tables etc	Simple html and css coding Minor graphics	Karen	Days
Advanced formatting, templates, maps, charts, logo, member-only area etc	Html and css coding	Karen	Weeks

Time estimates are approximate and reflect the total time for an activity. If it says hours, it can be done in less than a day, if it says days, it can be done in less than a week; and so on. All up, the team of six volunteers involved would have contributed somewhere between 2,000 and 3,000 hours of their time over the last two years.

Site membership

The wikidot platform includes tools to invite and register new members, to manage memberships and to promote key members to administrator roles. To better reflect the role of a member on our site, we have re-labelled 'member' to 'contributor'. Anyone can register as a 'contributor' by signing up with the special password, and 'contributors' are then allowed to create new pages and/or add comments to a website forum.

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Visitors to the website are only permitted to view pages, not edit, and members/contributors after they have signed in can only edit the pages that they have created. Website administrators, of which there are three currently, can create/edit/delete all content and pages. Website administrators are appointed by the site owner EHWA using the EHWA Google address (engineeringheritagewa@gmail.com). As the site matures and the number of contributors grows, we can revisit these rules and change how the site works. A concept yet to be developed is the option of a contributor being able to create and edit their personal profile (which can include photo/s and CV) which is then stored in a non-public area of the website as source material for future researchers.

Next Steps

While the site has been 'launched' and information on the site is already being found by Google searches, adding material to the site is continuing. Additional biographies are being loaded with content based on earlier work by Denis Cumming and Richard Hartley. The team has obtained copyright access to this material. Currently there are 178 biographies, 24 profiles and 110 information pages created on the website. The team met again on 24 January and considers that its priorities for 2020 are:

- website maintenance including contributor monitoring, responding to queries/comments, site backups, rationalisation of tags and the drafting of a manual;
- communications, prepare articles for EHA magazine and EAWA newsletters;
- develop a list of engineering companies and provide brief histories and references; and
- investigate options for a photograph archive.

Perth CBD Walking Tour

Introduction

The Perth CBD walking tour was launched as part of EA's centenary celebrations. It includes around 70 sites and three suggested walking routes around Perth. The web-based map linked from <http://ehwa.wikidot.com/places:perth> provides the stories and historical images for each site.

The following sections outline the work to set up the walking tour, with a focus on technical aspects.

Content Development

EHWA committee members developed the list of sites and the content for each site. The content aimed for about 300 words per site and 1-3 relevant images from the state library. Any photo taken before 1955 is out of copyright and could be used freely on the site. The content was all stored in a collaborative word document on EHWA's google drive during development.

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Creating the Online Version

The online version uses the Google My Maps tool (<https://mymaps.google.com/>) which requires a Google account. You can make as many different maps as you like, and it is very simple to use. You can add layers to your map, then add points of interest and routes to each layer by searching for an address, or just clicking on the map. With the editing tools you can change the place name, paste text from a word doc or add images and videos.

The My Maps tool offers some customisation options, for example changing the map icons, and adding extra information fields. I added a field for customised walking directions for each site. For more tech savvy folks, My Maps allows you to upload information from a spreadsheet file and download kmz map files.

Publishing the map

When the map is ready, you ‘publish’ the map and Google will provide a public link that can be shared with anyone or embedded in another website. On a computer, the public link will display in any browser. On a phone, it will generally display in the Google Maps app.

I found that the published link didn’t play nicely with Google Maps on my iphone. To address the iphone issue, I chose to embed the map into a page on the ehwa wiki site, using the embedding code that google provides and a bit of fancy coding of my own. This makes the map display using the phone’s browser instead of using the Google Maps app and works much better.

The printed brochure includes a QR code, created using one of the many free tools available online.

Volunteer Effort & Cost

The main effort was in creating the content for the 70-odd sites included in the tour, with around 20,000 words and ~100 images. Investigating map options took quite a while, but once the Google My Maps tool was selected, the online effort was mostly copying and pasting – perhaps a few days effort.

The Google Map tool is free, and permits printing of the map, provided the Google logo and copyright information is included. The only cost incurred was for EA’s graphic design and printing the hard copy brochure. EAWA also supported the launch and promotion of the walking tour.

Limitations and future development

The My Maps tool requires users to have an internet connection at all times while in use. This is not always convenient, say for travellers without mobile coverage, or for users who wish to view the content on an iPad which is not internet-connected. At present we have provided a .pdf document for non-connected users to download and print at home.

In future, we would like to develop the map into a standalone app which gives people the option to download all the content (e.g. from their hotel wifi). There are similar apps for Perth walking tours such as Heart of Gold and HistoricHeart, which also offer users ways to interact by taking selfies and viewing photos in augmented reality. An option for Engineers Australia Western Australia would be to apply for a LotteryWest grant to fund experienced programmers for this work.